INTRAOCULAR HEMORRHAGE IN BRIGHT'S DISEASE.
KERSHNER'S CASE.

OCULAR INTERNAL HEMORRHAGE IN A CASE OF BRIGHT'S DISEASE.

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This unique case history includes an ophthalmoscopic study of the pathology of certain well known lesions of the eye ground, here associated in an unusual manner, and clearing up with remarkable rapidity and completeness.

The case presented here is considered of sufficient interest to report for the following reasons: First—the changes are markedly different in the two eyes, the right showing a decided optic neuritis of the third degree, or to be more exact a neuroretinitis; the left demonstrating beautifully three types of retinal hemorrhage without neuritis. Second—the above changes occur in a young man who had no increase in blood pressure, no arteriosclerosis, and no increase in the white cell count. Third—elimination was at all tests proven normal or sufficient. The phenolphthalein test was used several times; albumin was present in the urine, and also casts, which were persistent. Fourth—the cause of extensive retinal hemorrhage, of whatever type, and neuroretinitis indicates in this case a common exciting and predisposing factor. Fifth—the sudden resolution with the simultaneous clearing up of the pathologic changes in both eyes points to a definite relation between the two conditions.

It is indeed interesting to watch the rapidly changing conditions in the left eye as they progressed, and as they retrogressed.

CASE.

The subject of this report came to the outpatient Eye Clinic of one of the Base Hospitals in the United States, on February 18th, 1918. At this time

he complained that he could not see as well as usual, and that he had discomfort in his eyes. The patient was a tall, slim American of the brunette type, moderately well nourished, twenty-eight years of age; and above the average of his class and type in intelligence and strength of mind, as his personal history will show.

Family and Personal History.—Two brothers died of typhoid fever, one of diphtheria, and another in infancy. A sister died in infancy, another during labor. His wife died of puerperal eclampsia. This man is a mechanic in civil life, and works in cotton mills; the duties of his job are repairing looms. He denies absolutely any alcoholic indulgence for the past seven years; during the preceding four years, however, he drank heavily and constantly; he was intoxicated two or three times each week, and often drank 250 ccs. of whiskey before breakfast during these four years.

Previous Medical History.—Our patient had a series of attacks of objective vertigo about eight years ago, which improved after the discontinuance of cigarette smoking, to which he had been addicted for some years. Very slight manifestations of this complaint have visited him from time to time since the original attack, but have been controlled by diet and attention to his bowels. About six years ago he had

nocturia for a short period; this occurred once or twice each night. Measles and mumps fifteen years ago. Denies gonorrhoea and syphilis; also malaria, scarlet fever, smallpox, rheumatism and typhoid. There is no history of edema of the extremities at any time of his life.

The present condition dates only to February 14th, 1918, previous to which he had never had attention directed to his eyes. On this date the patient experienced a toothache-like pain in both eyeballs; the pain lasted longer in the left, and became quite severe. The vision began to fail in both eyes, and as he expressed it, "There is a cloud over my eyes all the time." He, at the time, had slight dyspnea, after sharp drills, slight headaches, but slept well and relished his food. There were no gastric symptoms, no cough, nor night sweats. There was a slight increase in the post-nasal discharge.

Ocular Examination.—Inspection negative, conjunctiva normal, ocular excursions satisfactory in all directions, pupils 2 to 3 mm., react to light, accommodation and convergence promptly; anterior ocular segments of both eyes normal.

Ophthalmoscopic Examination.—Right. Media clear; periphery of the fundus was congested with large tortuous veins; the arteries appeared full but not tortuous. The macula was heavily stippled and injected, as was the whole fundus; disc margins obscured, physiologic cup filled with exudate; perivascular lymph vessels full and bulging. The refraction of the nerve head was plus 1.5 D. We found here a clear picture of optic neuritis of the third stage, with a very few minute hemorrhages along the vessels.

Left. Media clear. Periphery of the fundus normal, except for the heavy tortuous veins; macula dark in color and heavily stippled. The nerve head was partly filled with blood to the nasal side above and below; there was no blood to the temporal side, nor was there bulging of the nerve head; no full perivascular lymph vessels. Extending from the disc, and appearing to come from in the disc, and reaching to

the nasal side, was a roll-like hemorrhage, somewhat clubshaped, enlarging as it went from the disc, which formed an abrupt rounded end, $2\frac{1}{2}$ disc diameters from the disc. The nasal end showed three distinct major rolls or folds, and several smaller ones; the rolls extended into the eye 1 mm., $1\frac{1}{2}$ mm., and 2 mm., respectively. The color of this mass was uniformly deeper than the fundus, except for three irregular grayish white areas where the folds merged into one another. The whole fundus was only slightly, if at all, congested, altho the veins were large and tortuous.

The vision at this time was: Right = 10/200. Left = 20/40.

The examination the following day showed no change in the right eye except a slight increase in the number of small paravessel hemorrhages. In the left eye we found all that was seen on the previous day, with an additional hemorrhage of the subhyaloid type, extending from the disc up, one disc diameter. This mass was elongated, being $2\frac{1}{2}$ disc diameters in the horizontal meridian. It covered the superior retinal vessel, and presented a sharply defined superior border and ends, but the inferior border seemed to blend with the hemorrhage in the disc, or to be attached thereto. This new hemorrhage was heavier in color and more coarsely stippled than the first one. The vision remained the same in each eye.

At the visit on February 21st, the right eye was found to be as already described, with the addition of more edema of the macula, and the development of the typical stellate exudate about the macula. The left again showed additional changes; there were present well defined flame shaped hemorrhages down from the disc between the inferior temporal and nasal veins which all but obscured the arteries. This extended downward nearly one disc diameter. There were also the same type of changes above and at irregular intervals all around the subhyaloid mass. The base of these new areas seemed to come from beneath the margin of the second hemorrhage, both above and to the nasal and temporal

ends as well. Smaller flames were present above and below the original roll-shaped mass. These last additions to our study increased in extent and density somewhat for two or three days, by which time an illdefined stellate grayish exudate appeared surrounding the macula which was more pronounced above than below. The vision, now under homatropin was: Right = 1/200. Left = 20/200.

The writer does not wish to convey the impression that the original hemorrhage in the left eye has been absolutely as seen the first day. While in the main it has remained so, yet from day to day the width of some of the rolls has changed slightly and the position of this mass varied somewhat; that is, higher and lower on different days. The accompanying illustration indicates the process when fully developed. See Plate V.

This condition of affairs lasted seven days with little or no change in either eye. On the morning of the eighth day there was no change in the right eye, but in the left all efforts to outline the fundus except in the extreme periphery were futile. A grayish haze, indefinite and indistinct, was all that could be seen of the disc. The fundus reflex was very pale; the central portion of the fundus was even less distinct than looking at an object thru a dense fog; only a suggestion of the fundus reflex could be obtained. This, mind you, was March 3rd, 1918, at which time the vision was: Right = 3/200. Left, hand movement at 1/2 M.

The following morning, much to our surprise, the neuritis of the right eye was decidedly improved; in the left eye the fundus was visible, with an absolutely normal disc, with an entire absence of all hemorrhages except the subhyaloid above the disc. The only indication remaining of trouble in this eye was a slightly hazy deepening of color at the site of the original hemorrhage. The tortuous veins in both eyes were gone. Vision: Right = 20/200. Left = 20/30.

An additional twenty-four hours presented us with normal fundi and with normal vessels; except for the subhyaloid mass, in the left eye,

which was little if any more than half its original size. The stippling was coarser in this area and grayish white spots appeared over the surface, which had a tendency to coalesce. As indicated above, the right fundus was now normal, except for a slightly striated fullness of the disc.

By the end of the third week the right eye presented a clear disc; normal fundus and vessels. In the left, continued contraction in the subhyaloid mass. Vision was now: Right = 20/30 plus 1. Left = 20/30 minus 1.

On March 18th, just one month after coming to the clinic, the vision was: Right = 20/20 minus 1. Left = 20/20 minus 2; with normal right fundus, and the left normal but for the hemorrhage, which now was about one-half its former size.

The form fields showed nothing unusual and coincided with like fields in any case of optic neuritis, namely, decided contractions for form and colors. In the left eye the form fields were not contracted to any marked extent, but there were absolute scotomata corresponding to the fringes or ends of the flame-shaped area. With the sudden resolution or release of neuritis in the right eye there was not a correspondingly rapid widening of the form field. The first day of the decided change for the better, the fields were practically not altered; the following day about five degrees widening manifested itself, and then proceeded a slow but steady increase in the width until it was about 10 to 12 degrees under normal, when the patient was lost to us.

The physical examination by the medical service is as follows: "The patient is a fairly well nourished and well muscled individual, with no deformities. Station and gait are normal, tendon reflexes are equal and normally active. Hearing to rough test is normal; the tongue is moist, clean, tooth-marked, and coarsely tremulous. The tonsils are well atrophied and very slightly cryptic. The superficial glands are not palpable, the thyroid is slightly palpable and visible. The peripheral vessels are palpable, but do not pulsate. The chest is asymmetrical, on the

nipple level; the left side measuring $17\frac{3}{4}$ inches, the right side 16 inches. Expansion is shallow, but apparently equal. The lungs are resonant to normal limits, and expand at the bases. The breath sounds are vesicular; there are no rales."

"The cardiac impulse is neither visible nor palpable. The left border of the heart is 9 cm. from the midsternal line, and the right 2 cm. The cardiac rhythm is normal, 96 to the minute while standing. There is a mild sinus arrhythmia; at the apex there is a short, untransmitted, systolic murmur with a well accentuated second sound. At the aortic cartilage the sounds are somewhat distant with a slight ring of the second sound. At the pulmonary cartilage the first sound is lost, but the second is clear. At all areas the sounds are somewhat distant. The systolic blood pressure is 124 mm. mercury; the diastolic 90 mm. In a recumbent position the cardiac rate is 72 per minute. After an effort test there is a perfect recovery in two minutes."

"No tenderness or rigidity in the abdomen is found. The liver is just palpable on deep inspiration. The kidneys and spleen are not palpable; the skin reflexes are active."

The laboratory findings were as follows: "No leucocytosis, no malaria, no hookworm, and negative Wassermann.

Examination of the urine, 24 hour specimens showed it always acid and free from sugar.

Date	Amount	Albumin	Microscopic
2/18	2200 cc.	Present	Red blood cells, hyalin and granular casts.
2/21	2200 cc.	Present	Granular casts.
2/25	2200 cc.	Trace	Granular casts.
2/27	1800 cc.	Absent	Few granular casts.
3/10	1700 cc.	Absent	Few granular casts.

There are manifestly conditions here which are of interest. These are a close relation between neuritis and ocular hemorrhages in kidney disease, or an anatomic factor in this left eye which manifested itself by an optic neuritis in the right; and hemorrhages, multiple and massive, in the left.

THE TREATMENT OF TRACHOMA AND CHRONIC CONJUNCTIVITIS WITH NEGATIVE PRESSURE.

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This is the account of a practical method of treating trachoma less painful and less formidable than rolling the lids or grattage, but apparently capable of achieving similar results.

It is now three years since I began this treatment and my results have been so satisfactory that I feel that I am justified in reporting them. In the earlier stages of trachoma, when squeezing is the favorite method of treatment, this still ranks high in my estimation as the best method. But negative pressure at the time of operation or later can be of great service. It is to those cases of trachoma which are not operative cases, but which are so chronic in character, that they are almost incurable, that I wish to direct attention.

The most favorite method of treatment has been blue stone, and I must

say that I think it is one of the most barbaric treatments that could be devised. The pathologists state that in trachoma there is a round cell infiltration with the formation of scar tissue, and at the same time they speak of an infection that has not been positively identified. Now, I will not enter into the pathologic or bacteriologic aspect of the disease, but I would like to draw attention to the fact that negative pressure is the most positive way of abstracting the secretion and infection from the conjunctiva of the lid.

Blue stone acts by its irritating qualities and abstracts water from the tissues. Negative pressure draws the se-